RNA – Nucleic acid that consists of a long chain of nucleotides.

Its ribonucleic acid, single stranded, RNA uses Uracil instead of Thymine.

RNA molecules are involved in protein synthesis.

There are 3 types of specialized RNA molecules mRNA, tRNA, and rRNA.

rRNA - Ribosomal RNA is the RNA component of the ribosome, the organelle that is the site of protein synthesis in all living cells. rRNA provides a mechanism for decoding mRNA into amino acids and interacts with tRNAs during translation.

tRNA - tRNA is transfer RNA. It is RNA that transfers a specific active amino acid to a growing polypeptide chain at the ribosome site of protein synthesis during translation. tRNA has a 3' terminal site for amino aacid attachment. It also has a three base region calles the anticodon that can base pair to the corresponding three base codon region of mRNA.

mRNA - mRNA is the messenger RNA it is a molecule of RNA encoding a chemical "blueprint" for a protein product. mRNA is transcribed from a DNA template, and carries coding information to the sites of protein synthesis: the ribosomes. Here, the nucleic acid polymer is translated into a polymer of amino acids: a protein.

DNA and RNA have five carbon sugars, a phosphate group and a nitrogenous base.

The three important differences between DNA and RNA are

1. the sugar in RNA is ribose instead of deoxyribose.
2. The RNA is generally single stranded and not double stranded
3. RNA contains uracil in place of thymine

sequence of three adjacent nucleotides constituting the genetic code that determines the insertion of a specific amino acid in a polypeptide chain during protein synthesis or the signal to stop protein synthesis.

The genetic code is the set of rules by which information encoded in genetic material is translated into proteins by living cells. The code defines a mapping between tri-neucleotide sequences, called codons, and amino acids.